interantennal protuberance, face and mouth parts rich blackish chestnut-brown. Maxillary palpi ochraceous-tawny, distal fifth of ultimate joint mummy brown. Pronotum blackish brown with an intricate pattern of ochraceous-tawny. Tegmina mummy brown, the veins dark, tinged with chestnut. Abdomen blackish brown, each dorsal segment with a pair of large cinnamon, irregularly trapezoidal markings which widen caudad. Cerci cinnamon. Subgenital plate and median portion of preceding segment cinnamon-buff. Limbs ochraceous-tawny, heavily washed with cinnamon brown.

The type of this distinctive species is unique.

Notes on and Descriptions of the Nearctic Woodwasps of the Genus Xiphydria Latreille (Hym.).

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This paper, which is a contribution from the Branch of Forest Insects, Bureau of Entomology, is based on a study of the species of *Xiphydria* in the collections of the National Museum, the Academy of Natural Sciences of Philadelphia, the Public Museum of Quebec and the British Museum. The work is based in the greater part on the collections of the National Museum but contains notes from the species in the other collections. The type of the new species described and the neotypes here designated are in the United States National Museum.

The North American species of *Xiphydria* have been tabulated by Konow (Syst. Zusam. Chalast., pp. 207-315^{*}), but, inasmuch as that author did not have a large collection or access to the types, there are some points which do not accord with the facts. Harrington (Trans. Roy. Soc. Canada sec. 4, 1893) tabulates the Canadian species and MacGillivray (Bul. 22 Conn. Geol. Nat. Hist. Survey, 1917) tabulates the species of the Northeastern States. None of these papers include all of the species so it seems worth while to give a synopsis of the North American species. The larvae of *Xiphydria* are wood borers and confine their attacks to dead or dving branches

* In Zeitschr. syst. Hym. u. Dip., V, 41-59, 1901-05.

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of deciduous trees. The following key includes all of the North American species except basalis Say and walshii Westwood.

	Table to the Nearctic Species.
Ι.	Females2
	Males
2.	Abdomen rufous or rufo-ferruginous, without spots3
	Abdomen black, with pale lateral spots or bands4
3.	Head and thorax mostly black; prescutum V-shaped, longer than
	its anterior width; orbital carina extending well above the top
	of eyeabdominalis Say.
	Body entirely rufo-ferruginous; prescutum U-shaped, the anterior
	width subequal with the length; orbital carina terminating be-
	fore the top of eyeerythrogastra Ashmead.
4.	Flagellum whitemaculata Say.
	Flagellum black5
5.	Posterior orbits and superior orbital area shining, practically impunc-
	tate; antennae extending beyond the tegulae, hicoriae Rohwer.
	Posterior orbits and superior orbital area opaque with distinct
	punctures; antennae short not extending beyond the tegulae,6
6.	Second antennal joint distinctly less than half as long as the
	third and shorter than the fourth; prescutum V-shaped; legs
	reddishprovancheri Cresson.
	Second antennal joint distinctly more than half as long as the
	third and subequal with or longer than the fourth; prescutum
	U-shaped; legs largely black7
7.	Front with irregular raised lines, the area between the antennae
	and extending to the clypeus with well-defined raised lines;
	prescutum depressed posteriorly so the transverse rugae of the
	notauli are complete or nearly complete from notaulus to no-
	taulus; tergites three and four with nearly complete yellow
	bandscanadensis Provancher.
	Front and face reticulate; prescutum not depressed posteriorly,
	the notauli complete; tergites three and four with lateral spots,
_	tibialis Say.
8.	Superior orbital area coarsely sculptured; head sculptured above
	the supraorbital line; legs reddishprovancheri Cresson.
	Superior orbital area and head above the supraorbital line smooth
	practically without sculpture (the area behind the ocelli in
	<i>maculata</i> is sometimes somewhat sculptured)
9.	Second antennal joint distinctly shorter than the fourth; small
	terruginous or ruto-piceous species10
	Second antennal joint subequal with or longer than the fourth;
	black speciesII

10. Prescutum broad, the posterior width half or nearly half as great as the anterior width; mesepisternum and sternum yellow,

erythrogastra Ashmead.

Prescutum longer and more narrowed posteriorly, the posterior width distinctly less than half the anterior width; mesosternum black; mesepisternum black with a large pale spot,

abdominalis Say.

versely raised linesmaculata Say.

Xiphydria abdominalis Say.

- Xiphydria abdominalis Say, Keating's Narr. Exped. appendix vol. 2, 1824, p. 311; Leconte, Writings of Say, vol. 2, 1859, p. 208.
- Xiphydria attenuatus Norton, Proc. Ent. Soc. Phil. vol. 1, 1862, p. 144.
- Xiphydria ruficentris Cresson, Tran. Amer. Ent. Soc. vol. 8, 1880, p. 34.

The type of *abdominalis* Say is lost, but a female coming from Harrisburg, Pennsylvania, has been chosen neotype. The types of *attenuatus* Norton and *rufiventris* Cresson are in the Academy of Natural Sciences of Philadelphia.

In describing this species Say states that the wings are fuliginous. The type of *rufiventris* Cresson has nearly hyaline wings, but a reared series shows that the color of the wings varies somewhat and some of the specimens have dark enough wings to agree with Say's definition of fuliginous. The author does not doubt that this is Say's species. The rearings also definitely associate *attenuata* Norton as the male.

Distribution:—Pennsylvania (Say, Norton); New York (Cresson); New Jersey (MacGillivray); Harrisburg, Pennsylvania (Champlain and Kirk); Plummer's Island, Maryland (H. S. Barber).

Host-plant :- Tilia americana Linnaeus.

Parasites:-Pammegischia oveletii Bradley and Megarhyssa humida (Sav).

Patton (Can. Ent. vol. 11, 1879, p. 14) records attenuatus

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Norton as reared from twigs of *Betula nigra* collected in Connecticut, and describes the female. His description does not agree well with the species here considered as *attenuatus*, but does agree with a female which is a different and undescribed species and bears a Bradley manuscript name. The author is inclined to believe that Patton did not have *attenuata* as here determined, because the female of *attenuata* does not have pale marks on the abdomen.

Xiphydria erythrogastra Ashmead.

Xiphydria erythrogaster Ashmead, Can. Ent. vol. 35, 1903, p. 233.

The type of this species is lost, but a male from Lyme, Connecticut, which agrees with the description and is without doubt Ashmead's species, has been made a neotype.

Distribution:—Avalon, New Jersey (type locality); Lyme, Connecticut (A. B. Champlain); Lancaster, New York (M. C. van Duzee); Washington, District Columbia (J. A. Hyslop); Cabin John Bridge, Maryland (H. S. Barber); Difficult Run, Virginia (T. E. Snyder).

Host Plant :--- Carpinus caroliniana Walt.

Parasites:—Megarhyssa humida Say; Pammegischia ovelletii Bradley: Eurytoma species (not definitely proven).

Xiphydria maculata Say.

Xiphydria maculata Say, Bost. Jn. Nat. Hist. vol. 1, 1836, p. 221; Leconte's Ed., Say, vol. 2, 1859, p. 681.

Xiphydria albicornis Harris, Treat. Ins. Mass., 1841, p. 392.

Xiphydria mellipcs Harris, Treat. Ins. Mass., 1841, p. 393.

The type of *maculata* Say is lost, but a specimen from Plummer's Island, Maryland, which agrees with the description and is the same as Indiana specimens, is considered neotype. The types of Harris's species may be in the Boston Society of Natural History.

Specimens of *maculata* having only four spots on the abdomen agree with the description of *mellipes*.

Distribution:—Widely distributed through Canadian and Transition Zones in the eastern United States and Canada.

Host-plants:-Acer saccharinum Linnaeus.

Parasiles:—Pammegischia burquei Provancher and Megarhyssa nilida (Cresson).

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Xiphydria hicoriae new species.

This species is closely allied to *maculata* Say but may easily be distinguished by the characters given in the foregoing key. The females are easily separated from those of *maculata* by the black flagellum and the males can be recognized from those of *maculata* by the more shining abdomen.

2. Length to end of abdomen 12 mm.; sheath 2 mm. beyond the end of abdomen. Head between the eyes coarsely reticulate, with more or less distinct lines radiating from the ocelli; posterior orbits below obliquely striate; posterior orbits above and head behind the ocelli polished, practically without sculpture; orbital carinae strong almost complete; antennae rather long, extending to the tegulae, 17jointed; second antennal joint more than half as long as the third and distinctly longer than the fourth; mesoscutum coarsely reticulate; prescutum well defined, V-shaped, longer than anterior width; scutellum reticulate; tergites shining, finely granular along the apical margins, apical tergites polished. Black; inner orbits, posterior margin of head (interrupted at top) two lines on vertex, dorsal margin of pronotum, spot on lower margin of pronotum and small lateral spots on tergites two, three, four and five yellowish white; wings subhyaline, venation dark brown.

Paratypes indicate the species may be 18 mm. long, have the axillae and lateral spots on tergites six and seven yellowish-white.

8. Length 11 mm. Agrees well with female but the legs are dark piceous and the tergal spots are on segments two to six inclusive. In some males the four anterior legs below trochanters and the posterior tibiae and tarsi are rufo-piceous.

Distribution:—Harrisburg (type locality), Shiremenstown, Pennsylvania (W. S. Fisher); Syracuse, New York (Blackman). The species has also been taken at Westbury, Long Island (A. B. Champlain), and at Castle Rock, Pennsylvania.

Host-plant:—Hicoria.

Type:-Cat. No. 21554 U. S. Nat. Mus.

Xiphydria provancheri Cresson.

Xiphidion canadense Provancher, Nat. Can. vol. 7, 1875, p. 374 (not Niphydria canadensis Provancher 1. c. p. 373).

Xiphydria provancheri Cresson, Tran. Amer. Ent. Soc., vol. 8, 1880, p. 49.

Type in first Provancher collection, Public Museum, Quebec, bearing yellow label 138.

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Distribution:—Canada, New Hampshire, Massachusetts (Cresson); Ithaca and Saranac Inn, New York; Roxboro, Pennsylvania.

Host plant :--- "White birch." Specimens from Ithaca, New York, and the birch is probably *Betula populifolia* Marsh.

Xiphydria canadensis Provancher.

Niphydria canadensis Provancher, Nat. Can. vol. 7, 1875, p. 373.

Type in first Provancher collection, Public Museum, Quebec, bearing yellow label 137.

This species although close to *tibialis* Say should be easily distinguished by the characters given in the above table.

Distribution:—Other than the Canadian specimens in the Public Museum of Quebec the only other specimen seen is a female collected on the sand at Virginia Beach, Virginia, by A. D. Hopkins.

Xiphydria tibialis Say.

Xiphydria tibialis Say, Keating's Narr. Exped. vol. 2, 1823, appendix p. 312; Leconte's Ed. of Say, vol. 1, 1859, p. 208.

The type of this species is lost, but a specimen from New · Jersey agrees well with the type and is considered a neotype.

Distribution:—Pennsylvania (type locality); Canada (Harrington); New Jersev (collection and Smith 1910); Omega, Kansas (Crevecoeur).

Species not recognized.

Xiphydria basalis Say.

Niphydria basalis Say, Boston Jn. Nat. Hist. vol. 1, 1836, p. 22; Leconte's Edit. Say, vol. 2, 1859, p. 681.

Konowia basalis (Say), MacGillivray, Bull. 22 Conn. Geolg. Nat. Hist. Survey, 1917, p. 169.

The type of this species is of course lost and there are no specimens in any of the collections studied which can be this species. Judging from the description it is correctly placed, by MacGillivray, in the genus *Konowia*. Konow treats this as a good species with *walshii* Westwood as a synonym.

Xiphydria walshii Westwood.

Niphydria walshii Westwood, Thesaur. Ent. Oxon. 1874, p. 113; Kirby, Hym. Brit. Mus. vol. 1, 1882, p. 371, pl. 14, fig. 14; Harrington, Trans. Roy. Soc. Can. sec. 4, 1893, p. 138; Konow, Syst. Zusam. Chalas, p. 313.

The type of this species is a unique male and is in the British Museum of Natural History. It is, as Harrington suggested, probably closely allied to *provancheri* Cresson, but the antennae have fewer joints, there are two pale spots on the scutum (a variable character), and the description infers the mesepisternum is black. My notes from the type are inadequate, they are in part; head behind supraorbital line smooth and shining; postocellar area parted by an impressed line; venation in general very like fig. 85 of MacGillivray, Proc. U. S. Nat. Mus. vol. 29, pl. 41. It seems to the author that this is a species of *Xiphydria* and it is possible that it is *provancheri* Cresson.

List of Nearctic Species.

abdominalis Say.	erythrogastra Ashmead.
albicornis Harris=maculata Say.	maculata Say.
attenuata Norton = abdominalis	mellipes Harris=maculata Say.
Say.	provancheri Cresson.
basalis Say.	ruficientris Cresson=abdominalis
canadensis Provancher	Say.
canadensis (Provancher) = pro-	tibialis Say.
vancheri Cresson.	walshii Westwood.

The Rippon Collections go to the National Museum of Wales.

The collections of the late Robert H. F. Rippon, author of the superbly illustrated *Icones Ornithopterorum*, have been presented to the National Museum of Wales by Lord Rhondda, according to the London *Times*, as reported in *Science* for February 15, 1918. The majority of the specimens are said to be exotic, the insects to number over 100,000, including over 3,000 Papilionidae, over 5,000 Nymphalidae and over 40,000 Coleoptera, while dragonflies, mayflies, crickets, grasshoppers, stick- and leaf-insects, Diptera and Hymenoptera are expressly mentioned.

British Museum not to be used for Government Purposes.

It is stated by *Nature* that the British Government has abandoned the intention of using the British Museum building at Bloomsbury and the Natural History building at South Kensington for government departments, a decision which will meet with approval throughout the civilized world.